



## The new politics and geographies of scarcity

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### ABSTRACT

Scarcity is a dangerous idea and has long been a totalising discourse in resource politics and mainstream economics. A large body of work has critiqued the naturalisation of scarcity in discourses of environmental change, and has highlighted problems in how scarcity is conceptualised and the ways in which scarcities are socially and politically generated. Despite this, the 'scarcity postulate' – an assumed mismatch between infinitely expanding human desires and finite means to realise them – remains a powerful concept that continues to be deployed and re-deployed in a host of debates concerning environment and natural resources. From the 'Limits to Growth' debates that influenced environmental movements in the 1970s, discussions concerning the causes and consequences of the overlapping food, fuel and finance crises of the 2000s to debates concerning climate change, environmental security and militarisation in the Anthropocene, the discursive constellation of scarcity seems always at work. The focus of this special issue is the cross-scalar dynamics of what we identify as a 'new politics of scarcity'. This new politics is associated with new framings, contestations and entanglements of scarcity that are associated with new configurations of actors, new political economic relations and new spatialities and geographies of resource control and violence. Building on the empirical cases developed in this special issue, we examine the dynamics and the 'work' of the new cross-scalar scarcity politics in sustaining elite and capitalist power through justifying resource acquisitions and enclosures, large-scale policy reforms in the name of 'austerity' and intensification of extraction whilst politically side-stepping more thorny politics of (re)distribution, misappropriation, dispossession and social justice. We conclude by looking at alternative framings and vernacular conceptions of sustainability that challenge dominant scarcity-driven policies and programmes that intensify local exclusions and inequalities.

### 1. Introduction

In the last decade, models, projections and warnings of growing resource scarcity have become increasingly prominent in academic and high-level policy debates concerning green growth, planetary boundaries, climate-related uncertainties and the resource nexus. For example, Professor John Beddington declared in 2009 that the planet faced 'a perfect storm' of food shortages, scarce water and insufficient energy resources which threatened to unleash public unrest, cross-border conflicts and mass migration leading to major upheavals in the world and coming to a head in 2030 (Beddington, 2009). Does all this suggest a return to the debates of the 1970s, when resource scarcity became a prominent political concern due to oil shocks and accompanying financial crises? Nearly 50 years ago, researchers raised critical questions regarding the existence of scarcity amidst abundance and about the need to restrict population and economic growth before assumed natural 'limits' were transgressed (Meadows et al., 1972). A

growing environmentalist movement warned the public about the imperative for all humankind to coexist on 'spaceship earth', which was increasingly viewed as fragile and vulnerable (Ward, 1966).

In the wake of another set of so-called global crises (food, energy and financial), these discourses have been re-framed by researchers in fields like Earth Systems Science and Earth Systems Governance through the theorisation and articulation of concepts like 'Planetary Boundaries', 'the Anthropocene' and the 'Nexus' (see D'Souza, this issue, Allouche et al., forthcoming). As several articles in this special issue demonstrate, resource scarcity is evoked as forces of climate change, globalisation and population growth are discursively linked to new challenges and questions around the availability of resources to fuel growing demand for agricultural and industrial production, violent 'resource conflicts', international security and other threats to economic development.

These framings of scarcity have become leveraged by new partnerships and configurations of public, private, inter-governmental and

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NGO actors as presenting unprecedented opportunities for increased efficiency and intensified growth through the establishment of new regimes of both resource governance and capital accumulation. In the name of scarcity, food, water, fuel, energy, materials and minerals have become the focus of intense global and local political contests, legitimising water, land and green 'grabs' that re-allocate resource rights and benefits towards ostensibly more 'efficient' and economically productive users and speculators (see Scoones et al., this issue; Huff and Tonui, 2017; Borras et al., 2011; Fairhead et al., 2012; Mehta et al., 2012). This has resulted in changes to local ownership systems and resource rights that are often in informal tenure arrangements. This can lead to local resource shortages when resource 'enclosures' and formal management schemes restrict access by direct user groups, and to environmental degradation when imposed management plans or production regimes introduce changes in resource use that disrupt, destroy, discipline or replace existing natures and extensive production systems. Consequences include physical, social and economic dispossession and damage to livelihoods; transformation of local ecologies and resource bases; social differentiation; catalysation of conflict at different scales and infringement of people's basic human rights and dignity.

In recent years, 'nature' has been metricised, marketised, financialised and militarised with a range of unforeseen consequences for rural peoples and agrarian landscapes (Bumpus, 2011; Büscher & Fletcher, 2014; Duffy, 2014; Dunlap & Fairhead, 2014; Lunstrum, 2014; McAfee, 1999; McElwee, 2017; Smith, 2007; Sullivan, 2012). Yet, at the same time, different alliances are coming together to challenge dominant ways of conceptualising and framing scarcity and crisis. Alternative framings and conceptualisations of 'limits', environmental change, 'ecological society', sustainability and justice are being developed and articulated by a range of emerging or increasingly visible movements, from local anti-extractive campaigns, like NO-DAPL and Coal Nee More!, to international people's movements, like *La Via Campesina* (see below), to the pluralistic international movement coalescing around Degrowth.

In this context, this special issue<sup>1</sup> explores the cross-scalar dynamics of what we identify as a 'new politics of scarcity' that we associate with three 'coordinates'. The new politics is associated with new social and economic relations of domination and control. Furthermore, new configurations of actors, and, by association, new configurations of power, authority, knowledge, resistance and critique are coalescing around new scarcity framings and counter-framings. It is also about changing geographies of scarcities, characterised by their spatiality, particularly related to how 'old' socio-spatial distinctions (i.e. local-global, public v/s private, global South v/s global North etc.) are increasingly inadequate to describe the social and spatial 'proximity' of different stakeholders brought together in the context of contemporary scarcity-driven resource politics. Finally, the new politics is characterised by the emerging relations and implications of policy processes, particularly related to large-scale policy reforms such as austerity measures as well as trends in resource acquisitions and the intensification of resource and value extraction for people and landscapes around the world.

The rest of the Introduction discusses diverse conceptual framings of scarcity – its constellations and contestations – and addresses what is different about the 'new politics of scarcity'. We also introduce some of the key themes that will be addressed conceptually and empirically in this special issue. The papers comprising this issue add rich insights and

<sup>1</sup> Most papers were presented at the ESRC-funded STEPS Centre Resource Politics Conference held in September 2015. <http://resourcepolitics2015.com>. We thank Ian Scoones and colleagues in the STEPS Centre and the ESRC for its financial support (grant ES/I021620/1). We are grateful to Daniel Langmeier for his excellent research assistance and Lina Forgeaux for her fantastic copy-editing of this article. We thank colleagues of Geoforum, especially Rob Fletcher, for their patience and support. We are grateful to Rob Fletcher and Melissa Leach for their very useful comments. The usual disclaimers remain.

ethnographically-grounded understandings of how 'scarcity' becomes a defining optic across scales and various resource domains, leading to new alliances and emerging forms of inclusion, exclusion, domination and dispossession and critique. They also consider important questions about how scarcity, as a relation, is simultaneously constructed and 'real' and how diverse actors respond to, internalise, resist and re-configure these material and discursive dynamics. We conclude by looking at various articulations and alternative vernacular conceptions that see scarcity in different ways and also challenge scarcity-driven policies and programmes that intensify exclusions and inequalities.

## 2. The contested nature of scarcity

Scarcity is a dangerous idea (Rayner, 2010). It has long been a totalling discourse in resource politics in both the global North and South (see Mehta, 2010). The word 'scarcity' derives from the Old Northern French word *escarsete* and traditionally referred to a time-bound dearth, arising due to crop failures or insufficiency of supply of necessities of life (see Xenos, 1989). The current usage of scarcity, however, largely draws from modern economics, which is premised on the notion of ever-expanding human needs and wants and limited means to realise them (Luks, 2010; Mehta, 2010). Even though it has been demonstrated that *Homo economicus* is neither universal nor desirable (Panayotakis, 2011; Sahlins, 1972; Polanyi, 2001) and that needs, wants and desires do not have to be endless and unlimited (see Leiss, 1988), this notion of scarcity has come to dominate academic and policy debates.

The neoclassical economicistic conceptualisation of scarcity has also influenced a range of 'limits to growth' discourses based on the idea of ever-expanding human populations, increasing human wants and dwindling resources to realise them. This rhetorically powerful 'tragedy of the commons'<sup>2</sup> (cf. Hardin, 1968) framing, arising in the context of the strong influence of Malthusian concerns in 20th century environmentalism and development thought more broadly (Robertson, 2012), has led to scarcity and 'limits' being the go-to prisms through which to view and causally interpret a slew of issues ranging from global poverty and economic development, environmental change, conservation and even national and global security. This has given rise to a techno-authoritarian environmentalist narrative, often implicit in policy debates, that without strong, imposed 'checks', population growth will lead to expanding resource depletion, environmental degradation, and violent scrambles for scarce resources (Le Billon, 2015; Dawson et al., 2018). It is the logic of the zero-sum game of 'all against all', in which human nature is reduced to limitless and insatiable desires, existing in stark contrast to a world of inherent limits – limits to space, to labour, to food and energy resources. Within this narrative, scarcity is seen as absolute<sup>3</sup> and is the logic of a terrible natural universe, in which the many must struggle and often suffer.<sup>4</sup>

These powerful yet problematic ideas draw on seeing scarcity as a technical constant, which is rarely questioned. This means that scarcity tends to be universalised or taken for granted in academic and policy debates, in part because it is arguably the central problem of economics, and an underlying justification for industrial capitalism and even the

<sup>2</sup> Also known as the 'Magna Carta of compulsory population control' (see Robertson, 2012: 153 and Dean, 2015).

<sup>3</sup> 'Absolute' notions of scarcity are found in ecological-economic frameworks that draw on Malthus' thinking. This can be contrasted with the idea of 'relative' scarcity which is found in neoclassical economics that focuses on how individuals choose between their wants in order to maximise utility (see Daoud, 2015).

<sup>4</sup> Of course, scarcity can also be a catalyst for cooperation, both globally and nationally. For a discussion of this and interesting case examples, see Dawson et al. (2018) which highlight the need to go beyond a simple dichotomy between conflict and cooperation, towards highlighting their co-existence and interplay.

nation-state as a form of social and economic organisation and control (Conrad & Clark, 1987; Robbins, 1932; Samuelson, 1948; Stiglitz, 1988; Xenos, 1989). This has led to its naturalisation, i.e. the powerful and taken-for-granted idea that scarcity is a natural phenomenon that exists outside of human society and politics and can be isolated from planning models, allocation politics, policy choices, market forces and local power, social and gender dynamics (see Xenos, 1989; Mehta, 2010). Scarcity has thus become an instrumentalised and totalising hegemonic and largely unquestioned discourse, with the application of particular forms of scientific knowledge, technology, governance, market mechanisms and innovation evoked as the appropriate solutions.

However, such expectations embody a multitude of unexamined assumptions about the nature of the problem, about the technologies and ostensible fixes that are put forward as solutions and the implications of this trajectory for socio-environmental dynamics (see Xenos, 1989). Champeyrache (2014) argues that, because scarcity is a keystone in mainstream economics, its ability to explain the world economy (and society more generally) is far-reaching and often widely underestimated. This is because it depicts a 'pacified' economic world in which scarcity acts as a natural force. This is due to the mismatch between finite resources and the basic needs of a growing population. Scarcity thus is used to explain inequalities as natural and justify, for example, exclusionary property rights regimes (Champeyrache, 2014; Xenos, 1987). The controversial declaration of water as an 'economic good' in the early 1990s is a good case in point.

As many authors have argued, this 'pacified' view neglects the socio-political dimensions of scarcity. The socio-political dimensions of scarcity allow for the existence of persistent hunger in certain places even though there is enough water and food to go around. They enable some rich farmers manage to grow bumper crops during droughts whilst poor families lack basic drinking water. Also in the name of scarcity certain interventions such as controversial large dams are justified that may have high social and environmental costs for certain marginalised groups whilst benefitting more powerful actors. Thus scarcity can sometimes be 'manufactured' to meet political ends (cf. Mehta, 2005) or created 'through institutional and social means (Hirsh, 1976). These socio-political dimensions of scarcity thus allow powerful actors to impose their interests which lead to the exclusion and marginalisation of others.

Over time, precise meanings of the scarcity concept have shifted as definitions, applications and critiques of scarcity have diversified across disciplines and concerns. Despite this imprecision, scarcity has had a profoundly influential 'social life', becoming increasingly intertwined with ideas of growth, progress, abundance and sustainability, and has been perceived as a natural, universal and self-evident characteristic of the human condition. This has occurred (Xenos, 1989) to such an extent that debates around resource management, human well-being, livelihoods, inequality, economic and agricultural production, climate change, ecosystem functioning and their policy challenges are all most often explicitly or implicitly framed around scarcity (Fine, 2010; Luks, 2010; Xenos, 1989).

However, despite its ubiquity, scarcity is contested. It is not, as previously noted, a precise or unified concept; it means different things to different people, and its assumptions and implications vary across a range of disciplines and applied approaches that deal with problems at the intersection of humans and non-human natures. Detailed empirical research has shown how different resource users such as farmers, pastoralists, fishers (differentiated by gender, wealth, indigeneity, status and power relations) use their knowledges and experiences of particular versions of scarcities to identify problems (and solutions) in multiple ways (Hildyard, 2010; Mehta, 2005; Scoones, 2010). Still, dominant narratives of scarcity continue to persist, as demonstrated in this essay, and be privileged by powerful actors often to meet certain political ends.

As Hildyard (this issue) argues, the dominant discourse on scarcity is best approached as a political strategy to divert attention from (and

obscure) other explanations that root the causes of poverty and deprivation in imbalances of political and economic power and social inequalities (see also Mehta, 2010). This is why, in this special issue, contributors ask how current debates around natural resource scarcity draw on, diverge from or transform earlier visions of 'limits to growth', blind to history, politics, social difference, distributional implications, and failing to disaggregate local users and politics concerning resource use, consumption and production. What politics and power relations are hidden by the apocalyptic framings of global environmental disaster and scarcity? What interests are supported by particular framings of 'scarcity' or 'limits', justifying appropriation of resources by some to the exclusion of others? How are emerging fields of inquiry, engagement and activism challenging these dominant framings? Which alternative visions and pathways are emerging to realise a more just 'post-scarcity' world?

While not denying that scarcities are 'real' and exist for many, nor that environmental problems - not least due to the wanton over-exploitation of resources and climate change - are among our greatest challenges, the special issue argues that it is dangerous to depoliticise, naturalise and treat scarcity as a constant variable that can be blamed for our woes. Instead, we seek to bring cross-scalar politics to the forefront of scarcity debates. This means underscoring the politics of accumulation and allocation, and the ways in which scarcity is politicised and constructed in popular and policy debates, especially in ways that suit the interests of powerful players and create clear winners and losers in the context of so-called 'multiple-win' sustainability transitions. The rest of this introduction focuses on the new politics of scarcity and the key themes to be addressed in this volume.

### 3. Explicating the new politics of scarcity

While the recent resurgence of scarcity concerns could be considered as 'old wine in new bottles', representing a cyclical return to the debates of the 1970s, we argue that recent trends have given rise to what should be considered a new global politics of scarcity. These 'new politics' refer to scarcity entanglements that have emerged in the late 2000s and are associated with a number of overlapping trends and issues. Amidst perceptions of increasing complexity and uncertainty, five disparate processes have *interacted in mutually reinforcing ways* to shape how resources such as land, water and the commons are being re-allocated and reconceptualised. First, in the context of mounting concern over anthropogenic climate change, a defining moment was the so called 2007–2008 'triple crisis' of food, fuel and finance that led to skyrocketing food prices and a 'new scramble' for land and resources, resulting in a flurry of land and resource 'grabs' for large-scale production of food and biofuels, extraction and 'green' and speculative investment around the world. Concurrently, the rising influence of market environmentalism in high-level policy responses to climate change and other environmental problems has given rise to new 'fixes' at different scales involving a variety of metrification techniques, valuation regimes, new financial instruments and 'green' investment platforms. This is seen especially around the marketisation, commodification and financialisation of ecological characteristics and 'services', and is associated with new policy regimes and practices of resource control and territorialisation as both driver and effect (Neves and Igoe, 2012; Peluso and Lund, 2011; Harvey, 2003; Bakker, 2005; Borras et al., 2011). These dynamics have been driven and justified with scarcity narratives and have also led to the creation of new forms of scarcity and environmental vulnerabilities for communities in the global North and South.

Second, the ascendancy of neoliberal corporate and financial power across nature and society has led to new alliances, partnerships, knowledge/technologies and practices. Although for-profit conservation finance mechanisms often fail to perform as intended and remain 'negligible to and largely outside of global flows of capital', the discourse of the low-cost economic 'fix' for environmental degradation has

reshaped networks of power and authority around global conservation governance (Dempsey and Suarez, 2016: 3; Fletcher, 2014). In the past decade, international financial actors including insurance companies, pension funds, investment banks, the World Bank and the IMF have become trusted actors in environmental governance as nature-based and conservation finance has been promoted an asset class (cf. Credit Suisse et al., 2014; Huff and Brock, 2017; Kay, 2017). Powerful corporate actors have shown a lot of interest in resource scarcity, exemplified by the 2008 World Economic Forum concern of the nexus between water, energy, food and climate change security and their inter-linkages (Allouche et al., 2015).

Corporate actors have also played a key role in defining dominant debates around resource efficiency, security and scarcity (for an analysis of Nestle and Coca Cola's growing role in shaping water management debates, see Franco et al., 2013). While some may welcome growing corporate influence in natural resource management and the stated commitments to sharing risks and accountability, as Mehta et al. (2012) and others demonstrate, the potential re-allocation of resources to the 'highest economic value' can have detrimental impacts on local lives, livelihoods and water as well as food and water security. There is also a significant gap between the promotional instruments deployed by companies and what they are actually doing on the ground (see Franco et al., 2013; Sojamo and Larson, 2012). Moreover, it is important to ask whether global corporations are more interested in taking care of their own short-term water/food/energy security as they run their massive operations, than concerned about the implications for landscapes and the poor and marginalised (Sojamo and Larson, 2012; Newborne and Mason, 2012).

Third, in parallel, the financial crisis of 2008 and the ensuing Great Recession have led to a wave of scarcity-framed and scarcities-producing austerity policies that have restructured the public-private dichotomy, especially in the Global North. Creeping austerity has created shortages of 'basic services' through deregulation leading to privatisation and conversion to 'positional commodities' (Kallis, 2015). State reregulation – the inscription of *different* regulations to support privatisation and private profit-making – has been embraced by 'fiscal conservatives' and 'progressive neoliberals' alike (Fraser, 2017; Rickford, 2017). This has eroded the capacity of even formerly strong welfare states to provide basic services and support to populations, especially the most vulnerable amongst them. As Tellman (2015) and Panayotakis (2011) have effectively documented, governments have drawn on the idea of scarcity to justify cuts and austerity measures. While austerity has emerged as a reaction to scarcity, austerity politics have not delivered on their promises to bring about financial prosperity or lower debt. Instead, they have increased inequalities, and exacerbated class divisions and public discontent, leading to political instability and contributing to the rise of a wave of reactionary populist movements across the global North and South. As Panayotakis (2011: 3) argues, 'scarcity is the order of the day. Governments, the argument goes, have to cut back because they simply don't have any money. The argument is one example of the ways in that economic and political elites use the concept of scarcity to legitimise a capitalist economic system that enriches the privileged few even as it impoverishes and humiliates everybody else.' This capitalist system however is unable to allocate resources to those who need them the most.

Fourth, the idea of scarcity has been increasingly associated with particular ideas about security,<sup>5</sup> which, like scarcity, is also a contested concept. Environmental issues and resources are becoming increasingly framed and treated in practice as global security concerns, often framed as 'equivalent to military problems' (Floyd, 2008; Huff, 2017). Both security and scarcity are relational concepts and their relationships

were very much linked with environmental security debates of the 1990s (Homer-Dixon, 2010; for critique, see Huff, 2017) and the environmental peacebuilding debates of the 2000s (Allouche, 2014). Climate change has recently emerged at the fore of such policy and academic debates and is increasingly seen as one of the major threats to global, national and human security (Barnett, 2003). For instance, some studies suggest that climate change will increase the intensity of extreme weather conditions and has the potential to cause mass migration; create food and water insecurity; and cause several other environmental and social impacts which will give rise to violent 'climate conflicts' (Voigt, 2009; Khagram et al., 2003). This thinking is also reinforced in international policy circles.<sup>6</sup> Overall, the dominant logics and language of environmental security – of threats, risk, insurgency, securitisation and militarisation – have infused institutional practice, global, national and local environmental plans and policies governing resource investment. As a result, debates on conflict, economic development and environmental sustainability have all shifted in ways that create important intersections between conflict, conservation and extractive practices as they unfold and overlap in particular places (Duffy, 2010). These issues are picked up in this volume by Bharucha (this issue), Selby (this issue) and Witter and Satterfield (this issue).

Finally, the new politics is characterised by different ways of framing scarcity, sustainability and solutions to environmental and resource problems. These range from the 'nexus' described above, to the deployment of earth systems science that has led to resurgence of an interest in scarcity re-framed in terms of a refined conceptualisation of 'limits' at the global or planetary scale. Influential analyses suggest that we have entered the Anthropocene, a new epoch in which human activities have become the dominant driver of many earth system processes, from the climate, to biogeochemical cycles to ecosystems and biodiversity (Rockström et al., 2009a,b). This perspective highlights potentially catastrophic thresholds, with a focus on nine 'planetary boundaries' on which human life depends (ibid; Steffen et al., 2015). Insights and responses related to what would constitute a 'safe operating space for humanity' gesture to a return to the 1970s and a revitalisation of neo-Malthusian *Limits to Growth* discourses (Meadows et al., 1972) with many crises narratives and concurrent debates focused on scarcity, population growth and security.

While these efforts may bring a clearer focus on a range of biogeochemical processes and indicators at the planetary scale, the other side of the coin is they have also led to a new kind of 'global conservationism' (see McAfee, 2016). As an example, the prominent response from self-named 'Ecomodernists' (i.e. Asafu-Adjaye et al., 2015) lacks an understanding of limits and crises that is attuned to power, history, inequality and socio-political difference. Proposed solutions such as the next generation of nuclear energy to solve the energy crisis, geoengineering to combat global warming and genetically modified food crops to address hunger and food crises can lead to a re-consolidation of focus on technology and other decidedly apolitical ecologies (see a collection of responses to the Ecomodernists in Crist and Van Dooren, 2016; Rutherford, 2018). Such understandings are also leading to new manifestations of Malthusian techno-authoritarian-capitalist scarcity thinking wherein the drivers causing environmental harm are depoliticised and decontextualised through aggregate modelling and forecasting techniques (see Huff and Mehta, in press). Solutions flowing from this perspective are premised on an apolitical neo-modernist logic that fetishizes authoritarian market environmentalist approaches to managing nature and society 'within limits' and

<sup>6</sup> For example, the United Kingdom's 2010 National Security Strategy (NSS) acknowledges that climate change poses a security threat because it will increase the frequency and severity of extreme hazards, put pressure on international institutions including defence, increase pressure on food, water and energy supply, increase in diseases and also lead to increases in cross-border movements that could give rise to disputes (Her Majesty's Government, 2010).

<sup>5</sup> For a discussion of more bottom up notions of security based on citizen's entitlements and rights as opposed to the more problematic 'political ordering' versions of security, see Luckham, 2017.

increasing technical efficiency in extraction and industrial production. This, proponents claim, will result in a 'decoupling' of industry from negative environmental impacts that will transcend supposed natural limits to economic growth (see Fletcher and Rammelt, 2017). The discourse of 'limits' plays a key role here, but neglects any fundamental rethinking of growth models. As argued by Dean (2015), governing within limits has far-reaching implications, especially for the global poor:

A kind of governing within limits, under the tragic shadow of recurrent and imminent event, of the catastrophe that is always a kind of bio-catastrophe. One of the most enduring legacies of the liberal government of life to contemporary governing is our inability to think and act outside this catastrophic framework and logic in regard to not only environmental questions, but also public health concerns, economic crises, social policy and immigration. We should be vigilant about what happens when the burdens of solutions to these global problems continue to fall disproportionately on the most vulnerable.

Dean, 2015: 37

Also, as D'Souza highlights (this issue), what is missing in current global debates on the Anthropocene and planetary boundaries is a sense of unevenness in how these processes play out in different parts of the planet or how and why these shifts affect diverse locales, species, or social groups in markedly different ways. Also the origins of anthropogenic climate change, one of the major large-scale human modifications of the Earth System used to define the Anthropocene, were based on highly inequitable global processes from the outset. This is why Moore (2015), Malm (2015) and others reject the notion of the Anthropocene and instead focus on the socio-historical dynamics that led to the 'Capitalocene', thus marking the unprecedented impact of capitalism, imperialism and post-colonialism on humanity's relation with nature and its far-reaching consequences. D'Souza's article on South Asian environmental history argues for the need for narratives, accounts and analyses that highlight power and injustice, and historic divisions that are important to understand past changes and present responsibilities and realities for those in the global North and global South. He reveals how recent environmental history writings have avoided static notions of both colonials and locals to reveal the varied and complicated relationships between dynamic environments, power, identity, discourse and control and how these have influenced ecological outcomes. We now go on to outline the other key themes emerging from the pieces in this collection.

#### 4. The work of scarcity: exclusion, economisation and the new enclosures

As discussed above, land, forests, water, fuel and minerals have become the focus of global and local political contests around value and enclosure, but neither resource 'grabbing' nor the use of scarcity as a justification for it are new phenomena in and of themselves. Throughout recent history, transformative moments have inspired and revived debates around land control and associated issues of land use, labour and social control. As Scoones and colleagues (this issue) note, and others highlight in different ways and settings, notions of scarcity have often been invoked since the colonial era as a strategy to support exclusionary regimes of resource control, appropriation, dispossession, population restrictions and the securing of exclusionary property rights, particularly in sub-Saharan Africa. In a context shaped by historical cycles of land 'acquisition' by colonising powers and states expanding their territorial reach, the 'land rush' sparked by the global financial, food and fuel crises of the late 2000s was one such transformative moment, as we have discussed. This moment saw a revitalisation and intensification of a multi-layered scarcity discourse that functions to de-politicise and encourage resource investments, including productive and extractive acquisitions as well as speculative and virtual ones.

In recent years, a great deal of research in agrarian political economy and political ecology has explored the dynamics behind trends in land grabbing (Borras et al., 2011; Borras et al., 2012; White et al., 2012; Wolford et al., 2013) and alliances, practices and discourses underlying the conceptualisation and territorialisation of resource frontiers (Corson, 2011; Peluso and Lund, 2011). These trends have been driven by a new and variegated politics of accumulation with the spectre of catastrophic environmental change, the 'scare of scarcity' and the promise of continued 'sustainable' growth, both implicit and explicit, at the centre of policy narratives. These concepts and fears provide a sense of urgency and legitimacy for claims advanced by a range of actors, including policymakers, donors, intergovernmental agencies, private investors, asset management firms, and civil society, including NGOs and advocacy organisations.<sup>7</sup>

How scarcities are understood – where, at what scale, in what timeframe, for whom, in what context – is crucial for the conceptualisation of and response to the global land rush and associated scramble for control of water, minerals, forests and people. Over two hundred years have passed since Malthus erroneously predicted that population growth would exceed food production with checks required from deaths, disease, famine and late marriage. Yet neo-Malthusian thinking and its emphasis on growing population and population control have a massive reach and power despite their problematic implications and the huge body of discrediting evidence (Hartmann, 2010; Hildyard, 2010; Millstone, 2010). As Hendrixon and Hartmann (this issue), observe, Malthusian thinking is enjoying a revival even among respected scholars, NGOs and think-tanks. It underlies a resurgence in reasoning that might best be thought of as demographic eschatology. One must crucially ask if the fixation with overpopulation distracts from focusing attention on more crucial dynamics of resource distribution, availability and access (see Fletcher et al., 2014), such as how power is distributed in society, gender, caste and ethnic discrimination, unfair terms of trade, exclusionary state planning, centralising technologies, tenure arrangements and systemic drivers of ecological degradation.

Bharucha's article (this issue) focuses on how national, state and local level narratives in India draw causal links between growing agrarian distress, water scarcity and the climate in the Indian rainfed drylands. Climate-centric scarcity narratives in the Indian rainfed drylands predate climate-change, and have remained remarkably stable over time. Her article demonstrates how state Climate Action Plans in India utilise the same broad framing as older sets of policies of water management and water scarcity, employing many of the same discursive tactics concerning generalised scarcity. The solution, be it for climate change, water scarcity or agrarian distress, tends to be increasing water supplies. Usually such narratives tend to focus on augmenting water supplies, but these augmented water supplies could end up deepening local scarcities and inequalities due to due to apolitical notions of both the 'community' and the nature of the problem.

<sup>7</sup> Notable examples include the Land Degradation Neutrality Fund, an investment platform developed by the UNFCCC in partnership with Mirova (the so-called 'responsible investment' division of Natixis Global Asset Management) and a large network of public, private and NGO partners including the European Investment Bank, the Global Environment Facility, the Worldwide Fund for Nature, a number of pension funds and the government of Luxembourg (Huff and Brock, 2017) and the QIT-Madagascar Minerals (QMM) ilmenite mine in southeastern Madagascar, a public-private partnership between Rio Tinto's subsidiary QIT-Fer et Titaine and the Malagasy government, whose biodiversity offsetting program brings together the International Union for the Conservation of Nature (IUCN), Malagasy and international universities and research institutes, civil society organizations, and high-profile organisations such as Bird Life International, the Wildlife Conservation Society (WCS), Conservation International (CI), Flora and Fauna International, Kew Botanical Gardens, Missouri Botanical Gardens and USAID (Kill and Franchi, 2016; Rio Tinto, 2016).

## 5. Securitisation, militarisation, and scarcity politics

In many ways, the framing of the environment-security nexus can be seen as a reframing of the environmental security debates of the early 1990s through a climate change lens. Through the 1990s, environmental security research was preoccupied with relationships between the so-called 'resource curse', population growth, and environmental degradation (i.e. Homer-Dixon, 1994), and the question of whether scarcity or abundance of natural resources predicts risk of violent conflict in the context of 'weak' states (Collier and Hoeffer, 2005). These themes remain key concerns in security studies, but are being revisited through a climate change lens. Framed as 'the ultimate threat multiplier', the UN, for example, predicts that climate change will increasingly exacerbate pre-existing social, economic and environmental risks that social fuel unrest, potentially resulting in violent 'climate conflicts'. A 2011 UNEP report identified 19 'climate hotspots' in the Sahel region alone where climate change, authors claim, has already increased resource scarcity, leading to increased competition, migration, political destabilisation and conflict (UNEP, 2011). Researchers and politicians, including Britain's Prince Charles, Barak Obama and former US Vice President Al Gore have popularised the idea that the Syrian Civil War is in essence a 'climate war'. According to the 'climate war' thesis, extreme drought in the late 2000s, attributed to anthropogenic climate change and resulting resource scarcity, migration and population pressure, has been described as a major causal factor in the violent uprising that began in Syria in 2011 (see Kelley et al., 2015).

This narrative has traction, particularly with researchers, journalists and members of the public eager for evidence that can be used to communicate about the urgency of climate change or can be used to undermine climate change denial. However, simple causal explanations based on assumptions about relationships among climate change, demographic change, scarcity and conflicts do not take history or ecological complexity into account. We should exercise caution when discussing the conflict and security implications of climate change (see for e.g. Buhaug, 2010; Hartmann, 2010). In this issue, Jan Selby shows the limits of the climate conflict thesis in the context of the Syrian civil war but more fundamentally points out the centrality of the political in causing environmental scarcities and insecurities. As Selby demonstrates, the recent drought and agricultural crisis in Syria cannot be dissociated from long-term processes of agricultural decline. Like many other previous civil wars (e.g. Darfur and South Sudan for example), Syria has again been used as a catastrophic example of what is looming, a foretaste of what is to come as the planet warms. These catastrophic narratives are well deconstructed and analysed by Selby, demonstrating how figures and statistics are often blown out of proportion by international media and think tanks to gather international attention and momentum. This refers to what Demeritt (2001) has termed statistical picturing, done by a variety of new quantitative and graphical practices that make maps and statistics appear as objective evidence of the natural limits those objects seemingly exhibit.

Another aspect of this scarcity-security nexus is the core neo-Malthusian spectre of demographic change and overpopulation. As shown in the article by Hendrixson and Hartmann (this issue), the so-called African youth bulge is seen as a threat to climate change mitigation and adaption, as well a threat to European stability as a result of migration. These discourses both echo a racial stereotyping on population control and a gendered representation of it, contrasting girls and boys as respectively positive and negative agents of sustainable development, security and stability. Think tanks like the Population Institute or the Population Media Centre champion these alarmist concerns, painting youth populations in developing countries as time bombs. In this logic, family planning is seen as the solution to deal with pressures on our resources, whether forests, land or soil and smaller family will make "us" more climate change resilient. This is the logic followed by the US Agency for International Development. The direct links to security in these discourses are then established. The impact of the youth

bulge on natural resource depletion leads to state fragility and conflict, or to massive migration of environmental climate related refugees and negative impact on global western-centric stability.

Alarmist discourses on the scarcity-security nexus need to be understood in part through a political economic logic in terms of which civil society and policy actors are articulating narratives to secure funding in a competitive environment. But these discourses also reveal a far deeper structural logic. Structurally, these crisis narratives need to be understood as part of imperialist, euro-centric and racist ideas, central to the socio-economic dynamics of the military-industrial complex and its capacity to transform the wider system. These new framings of environmental security are also associated with political dynamics around the militarisation and criminalisation (including privatisation of security) of environmental issues.

The mainstream literature on environmental security rarely acknowledges the structural social and racial inequalities embedded in the social construction of scarcities, as emphasised in the political ecology literature. Witter and Satterfield (this issue) describe how, in an historical setting in which racialized neo-Malthusian tropes justify dispossession, impoverishment and political marginalisation, logics of militarised conservation in the form of anti-poaching efforts in Limpopo National Park are associated with what they term 'the eternal loop of scarcity' that has enabled the direct violence associated with rhino poaching to take hold in this region. While the chronic production of poverty enables a space for poaching, this becomes exacerbated as militarised conservation practices continue to exclude people from access to alternative livelihoods and well-designed resettlements programmes.

## 6. Resistance to scarcity-as-elite-strategy, and scarcities in the vernacular

In this final section, we explore growing mobilisations and resistance to dominant framings and practices around scarcity. As argued by Hildyard (this issue), it is important to understand and expose how elites construct and maintain the dominant scarcity discourse that is the focus of many of the articles in this issue. It is equally important to understand the activism (both successful and unsuccessful) of those resisting scarcity as an elite strategy and aspect of elite power. Hildyard thus focuses on the notion of 'impolite society' (as opposed to 'polite society') to understand new institutional forms and practices that seek to challenge the status quo through what Gorz (1968) called 'non-reformist reforms'. He argues that impolite society around the world is forging new cultures of provisioning, nurturing and mutual support to weather the destruction that neoliberalism is inflicting. While never completely free of capital as a social order, initiatives such as community-supported agriculture, land and factory occupations, credit unions, citizen-run initiatives such as health clinics, food centres and legal aid hubs as well as grassroots struggles (such as that of the Kurdish Freedom Movement in Turkey and northern Syria) are seeking to dismantle the oppressions of capitalism, patriarchy, nationalism, class and other forms of power relations and associated forms of injustice. These are thus posing an emerging challenge to scarcity-as-elite-strategy.

There are other examples of different actors and groups contesting dominant ideas, meanings and implications of scarcity and 'limits' through the articulation of alternative vernacular conceptions of needs and scarcity as well as praxes that challenge scarcity-driven policies and programmes that intensify local exclusions and inequalities. Resisting scarcity can take many forms depending on the actors involved, their geographies and their socio-economic circumstances.

The literature on degrowth is recent and there are diverse approaches, in part due to the different linguistic roots.<sup>8</sup> Largely,

<sup>8</sup> It is known as *Postwachstum* (post-growth) in German, *décroissance* in French, *decrecimiento* in Spanish.

degrowth is concerned with the well-being of both humans and the natural basis of life, calling for a radical transformation of capitalist society and consumption patterns and a new kind of 'limits' to growth. Some strands of degrowth clearly draw on hegemonic assumptions of natural scarcity and Neo-Malthusianism that we have criticised in this introduction (see [Finley, 2017](#)). Yet others are also highly critical of the scarcity narrative, Neo-Malthusianism, and offer new theoretical ways to recast key concepts such as limits, abundance and sufficiency. For example, [Latouche \(2013\)](#) juxtaposes the discourse of scarcity with a concept of 'frugal abundance' (*abondance frugale*). Indeed, many degrowth proponents resist framing environmental issues in ways that take resource scarcity as a given and instead start from a position of abundance (see [D'Alisa et al., 2014](#); [Chertkovskaya et al., 2017](#)). Many degrowth writers have also criticised the scarcity narrative, viewing it as the main driver of economic growth (e.g. [Passadakis and Schmelzer, 2010](#)) and limitless human needs, inducing endless growth and innovation (see [Frauenlob et al., 2017](#)). As articulated by [Kallis and March \(2015\)](#), '[o]nly a collective self-limitation, premised on sharing the commons, dissolves scarcity and opens up the possibility for a society that is not capitalist' (2015: 366). This resonates with [Bookchin's \(1971\)](#) observations in *Post Scarcity Anarchism*, in which he contrasts bourgeois society as governed by the imposition of manufactured scarcity to a post-scarcity society that cultivates an attitude of abundance.

According to [Verzola \(2015: 230\)](#), abundance has often been denied by economists because the field has largely been concerned with 'studying efficient options in the context of scarcity'. However, it is emerging as a field of interest to those critiquing the widespread uptake of dominant scarcity narratives (see [Daoud, 2018](#)). [Verzola \(2015\)](#) argues that abundance is manifest in multiple ways, both material and non-material, ranging from information and knowledge to plenitude in nature and its ability to sustain life of humans and non-humans. For example, the internet has the potential to reproduce and share information, which can be readily available to millions. However this information abundance is often undermined by intellectual property rights that can create artificial scarcities. Other examples include abundant energy from the sun to sustain life for all being as well as the abundance of global commons such as the earth's oceans and rivers to sustain vast populations. While these and other abundant material resources are under threat due to overexploitation and global warming, their potential to provide for the wellbeing of all humankind should not be underestimated.

The study of abundance could thus engage with the study of the commons, not just local common property resources which have been extensively studied (e.g. [Ostrom, 1990](#)), but also the global commons such as the atmosphere and oceans, as well as ensuring 'abundant' resources for all humans, especially in terms of universal access to basic goods and services such as water, food, shelter and healthcare. Rather than focus on absolute scarcity or abundance, it is important to look at both scarcity and abundance as 'relative'. This in turn emphasises the need to focus on 'sufficiency'. Sufficiency discourses propose changes in consumption and behaviour as ways to manage and deal with present and future scarcities (e.g. [Ekardt, 2016](#); [Schneidewind and Zahrnt, 2013](#); [Sommer and Welzer, 2016](#)).<sup>9</sup> In the words of [Ekardt \(2016: 1\)](#), 'Sufficiency implies the idea of a simple life and a sustainability strategy and a vision for the future through changing behavior'.

<sup>9</sup> [Paech \(2015\)](#) suggests several sufficiency methods that challenge the scarcity narrative. These include: intensification of the use of products through sharing which also helps strengthen social cohesion; an extension of the useful lives of products and a concerted move against planned obsolescence which creates artificial demand for products. For example, smartphones are made obsolescent after a few years ([Tröger et al., 2017](#)) but these contain a remarkable variety of rare earths around which a certain scarcity politics has also developed ([Stegen, 2015](#)).

Other recent studies on global scarcity have explored how scarcity itself can be a catalyst for co-operation and peace, rather than conflict, thus calling into question the dominant causal linkages made between scarcity and conflict. [Dawson et al., 2018](#) argue that incidents of scarcity (be they around transboundary water management, fishing or regional energy provision) can also promote cooperation in international relations and diplomacy, going beyond traditional notions of competitive nation states.

Feminist scholars have also offered powerful challenges to the logic of '*Homo economicus*' and to dominant patterns of consumption and production that are promoting structural inequalities and scarcities. Feminists variously call instead for development processes that respect commons and livelihoods; for recognition and value of care and social reproduction in economic and ecological debates (e.g. [Vaughan, 2007](#)); for replacing efficiency with sufficiency ([Salleh, 2009](#)); and for a focus on commons, communing and 'enough' in order to restructure production, consumption and political-economic relations along truly sustainable pathways ([Wichterich, 2012, 2015](#)).

Many of these theoretical conceptualisations find affinity with movements in the global South and North opposing dominant narratives of scarcity or articulating alternative conceptualisations and praxes. In recent years, the idea of *sumak kawsay* (Good Life) has gained ground in Latin America and is also enshrined in the Constitutions of Bolivia and Ecuador. *Sumak kawsay* refers to reciprocity, communal property, connection with nature, social responsibility and community-based consensus ([Simbaña, 2011](#)). According to McAfee, *sumak kawsay* 'rejects the construction of ecological limits as absolute scarcity, focusing less on the finitude of resources and carbon sinks than on the anti-entropic, life-giving relationship between human labor, water, soil, sun, and the activities of other species' ([McAfee, 2014: 4](#)).

In India, *ecoswaraj* or 'Radical Ecological Democracy' (RED) ([Kothari, 2014](#); [Kothari, Demaria and Acosta, 2014](#)) is providing alternatives to the current development and governance system through its focus on ecological sustainability and wisdom, social well-being and justice, direct democracy, economic democracy and knowledge commons ([Kothari, 2014](#); see also [Panayotakis, 2011](#) for a discussion of economic democracy). The food sovereignty movement ([Roman-Alcalá, 2017](#)) represented by La Vía Campesina, an international peasant organisation in both the global South and North ([La Vía Campesina, 1996](#)), exposes wider issues of social control and power in food systems ([Allouche, 2011](#)). It stresses the role of the state as the guarantor of rights as well as the sovereignty of people and their agency in managing and creating local food systems as well as their claim-making capacities (see [Mann, 2017](#)). The notion of food sovereignty also acknowledges the socially constructed nature of scarcities in land, water and food and the importance of the rights of vulnerable food producers, especially rural women (*ibid*). Similarly, around the world, different groups of farmers and indigenous people are resisting land, water and green grabs in ways 'which constitute the 'politics from below' of the global land grab' ([Hall et al., 2015: 483](#)). [Bersaglio \(2017\)](#), [Devine \(2016\)](#), [Rocheleau \(2015\)](#) and others have examined responses to resource grabbing in ways that go beyond seeing rural and indigenous peoples as mere victims of different forms of grabbing, from ways in which they emerge as new 'rights-bearing subjects' to ways in which resistance is networked, rooted and territorial ([Rocheleau, 2015](#)).

All the trends and movements described above may well display internal contradictions around dynamics of class, gender, race and ethnicity. There are also clearly contradictions between articulations of 'the good life' in the constitutions of Bolivia and Ecuador and an extractivist state that is undermining the lands and integrity of marginalised indigenous populations. Many have questioned the implications of a degrowth agenda for parts of the world, especially in the Global South, where 'growth' has never been achieved or has failed to deliver promised development (see [Escobar, 2015](#)). Despite these contradictions, these movements and their alternative vocabularies are important because of their ability to challenge dominant scarcity

narratives.

## 7. Conclusion

In this article, we have demonstrated how scarcity remains a dangerous concept, despite a large body of work highlighting how it has been naturalised in mainstream environment and development debates. The focus of this Introduction and special issue has been the 'new politics of scarcity' which refers to recent framings, contestations and entanglements of scarcity linked with new configurations of actors and emerging discourses that are leading to new forms of resource control and violence. These processes are currently justifying resource acquisitions and enclosures and large-scale policy reforms, often in the name of scarcity and austerity. The new politics of scarcity encompasses a politics that allows for the entrenchment, intensification or 'doubling down' of prevailing patterns of accumulation and exclusion. At the same time, we are also witnessing an 'opening up' of new debates and praxes around 'limits' and environmental change that reject dominant economic and Neo-Malthusian conceptualisations of scarcity that have driven policies and programmes that intensify local exclusions and inequalities. These represent 'nodes of resistance' (Weeber, 2016) to the pernicious impacts of scarcity narratives and politics (see also Gilbert, 2016). Also, just as scarcity politics has led to new coalitions between corporations, states and banks, similarly resistance is also networked and draws on a wide range of strategies and alliances with many actors, including local communities, academics, community groups, NGOs, elders and ordinary citizens and also increasingly legal practitioners, heterodox economists and financial experts. As contributions to this collection highlight, dominant narratives and configurations of scarcity have sustained elite and capitalist power and led to deepening inequalities and vulnerabilities around the globe. A range of strategies, tactics and tools – material, symbolic, intellectual as well as practical – is required to expose and tackle them. We hope that this Special Issue will be a small contribution to this struggle.

## References

Allouche, J., 2011. The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade. *Food Policy* 36, S3–S8.

Allouche, J., 2014. The role of informal service providers in post-conflict reconstruction and state building. In: Weithal, E., Troell, J.J., Nakayama, M. (Eds.), *Water and Post-Conflict Peacebuilding*. Routledge, London, pp. 49–60.

Allouche, J., Middleton, C., Gyawali, D., 2015. Technical veil, hidden politics: Interrogating the power linkages behind the nexus. *Water Altern.* 8 (1), 610–626.

Allouche, J., Middleton, C., Gyawali, D., forthcoming. The Water-Food-Energy Nexus: power, politics and justice. Routledge (Pathways to Sustainability Book Series, STEPS Centre), London.

Asafu-Adjaye, J., Blomquist, L., Brand, S., Brook, B., DeFries, R., Ellis, E., Foreman, C., Keith, D., Lewis, M., Lynas, M., 2015. An Ecomodernist Manifesto. The Breakthrough Institute, Oakland.

Bakker, K., 2005. Neoliberalizing Nature? Market environmentalism in water supply in England and Wales. *Ann. Assoc. Am. Geograph.* 95 (3), 542–565 (accessed 01.02.18).

Barnett, J., 2003. Security and climate change. *Global Environ. Change* 13 (1), 7–17.

Beddington, J., 2009. Food, Energy, Water and the Climate: A Perfect Storm of Global Events? Government Office for Science, London.

Bersaglio, B., 2017. Green Grabbing and the Contested Nature of Belonging in Laikipia, Kenya: A Genealogy. PhD thesis. University of Toronto.

Bookchin, M., 1971. Post Scarcity Anarchism. The Ramparts Press, San Francisco.

Borras, S.M., Hall, R., Scoones, I., White, B., Wolford, W., 2011. Towards a better understanding of global land grabbing: an editorial introduction. *J. Peasant Stud.* 38 (2), 209–216.

Borras, S.M., Kay, C., Gómez, S., Wilkinson, J., 2012. Land grabbing and global capitalist accumulation: key features in Latin America. *Can. J. Dev. Stud./Revue canadienne d'études du développement* 33 (4), 402–416.

Buhaug, H., 2010. Climate not to blame for African civil wars. *Proc. Natl. Acad. Sci.* 107 (38), 16477–16482.

Bumpus, A.G., 2011. The matter of carbon: understanding the materiality of tCO<sub>2</sub>e in carbon offsets. *Antipode* 43 (3), 612–638.

Büscher, B., Fletcher, R., 2014. Accumulation by Conservation. *New Political Economy* (ahead-of-print), pp. 1–26.

Champeyrache, C., 2014. Artificial scarcity, power, and the Italian Mafia. *J. Econ. Issues* 48 (3), 625–640.

Chertkovskaya, E., Paulsson, A., Kallis, G., Barca, S., D'Alisa, G., 2017. The vocabulary of degrowth: a roundtable debate. *Ephemera* 17 (1), 189–208.

Credit Suisse, WWF and McKinsey & Company, 2014. Conservation finance: moving beyond donor funding toward an investor-driven approach. Credit Suisse AG, World Wildlife Fund and McKinsey & Company.

Crist, E., Van Dooren, T. (Eds.), 2016. Special commentary section: replies to an Ecomodernist Manifesto. *Environ. Humanities* 7 (1).

Collier, P., Hoeffler, A., 2005. Resource rents, governance, and conflict. *J. Conflict Resolut.* 49 (4), 625–633.

Conrad, J.M., Clark, C.W., 1987. *Natural Resource Economics: Notes and Problems*. Cambridge University Press, Cambridge.

Corson, C., 2011. Territorialization, enclosure and neoliberalism: non-state influence in struggles over Madagascar's forests. *J. Peasant Stud.* 38 (4), 703–726.

D'Alisa, G., Demaria, F., Kallis, G., 2014. Degrowth: A Vocabulary for a New Era. Routledge, London.

Daoud, A., 2015. Scarcity and artificial scarcity. In: Cook, D.T., Ryan, J.M. (Eds.), *The Wiley Blackwell Encyclopedia of Consumption and Consumer Studies*. John Wiley & Sons, Malden, pp. 489–491.

Daoud, A., 2018. Synthesizing the Malthusian and Senian approaches on scarcity: a realist account. *Camb. J. Econ.* 42 (2), 453–476.

Dawson, M.C., Rosin, C., Wald, N. (Eds.), 2018. *Global Resource Scarcity – Catalyst for Conflict or Cooperation?* Routledge, Abingdon and New York.

Dean, M., 2015. The Malthus effect: population and the liberal government of life. *Econ. Soc.* 44 (1), 18–39. <https://doi.org/10.1080/03085147.2014.983832>.

Demeritt, D., 2001. The construction of global warming and the politics of science. *Ann. Assoc. Am. Geogr.* 91 (2), 307–337.

Dempsey, J., Suarez, D.C., 2016. Arrested development? The promises and paradoxes of "selling nature to save it". *Ann. Am. Assoc. Geograph.* 106 (3), 653–671.

Devine, J.A., 2016. Community forest concessionaires: resisting green grabs and producing political subjects in Guatemala. *J. Peasant Stud.* 45 (3), 565–584.

Duffy, R., 2010. *Nature Crime: How We're Getting Conservation Wrong*. Yale University Press, New Haven.

Duffy, R., 2014. Waging a war to save biodiversity: the rise of militarized conservation. *Int. Affairs* 90 (4), 819–834.

Dunlap, A., Fairhead, J., 2014. The militarisation and marketisation of nature: an alternative lens to 'Climate-Conflict'. *Geopolitics* 19 (4), 937–961.

Ekardt, F., 2016. Suffizienz: Politikinstrumente, Grenzen von Technik und Wachstum und die schwierige Rolle des guten Lebens. *Soziologie Und Nachhaltigkeit - Beiträge Zur Sozial-Ökologischen Transformationsforschung* 4, 25.

Escobar, A., 2015. Degrowth, postdevelopment, and transitions: a preliminary conversation. *Sustain. Sci.* 10, 451.

Fairhead, J., Leach, M., Scoones, I., 2012. Green Grabbing: a new appropriation of nature? *J. Peasant Stud.* 39 (2), 237–261.

Fine, B., 2010. Economics and scarcity: with Amartya Sen as point of departure. In: Mehta, L. (Ed.), *The Limits to Scarcity: Contesting the Politics of Allocation*. Earthscan, London, pp. 73–91.

Finley, E., 2017. Beyond the limits of nature: a social-ecological view of growth and degrowth. <https://entitleblog.org/2017/02/07/beyond-the-limits-of-nature-a-social-ecological-view-of-growth-and-degrowth/> (accessed 09.02.18).

Fletcher, R., 2014. *Taking the Chocolate Laxative: Why Neoliberal Conservation Fails Forward*. Nature Inc.: *Environmental Conservation in the Neoliberal Age*. The University of Arizona Press, Tucson, pp. 87–107.

Fletcher, R., Breitling, J., Puleo, V., 2014. Barbarian Hordes: the overpopulation scapegoat in international development discourse. *Third World Quart.* 35 (7), 1195–1215.

Fletcher, R., Rammelt, C., 2017. Decoupling: A key fantasy of the post-2015 sustainable development agenda. *Globalizations* 14 (3), 450–467.

Floyd, R., 2008. The environmental security debate and its significance for climate change. *Int. Spectator* 43 (3), 51–65.

Franco, J., Mehta, L., Veldwisch, G.J., 2013. The global politics of water grabbing. *Third World Quart.* 34 (9), 1651–1675.

Fraser, N., 2017. The end of progressive neoliberalism. *Dissent Magazine*, January 2, [https://www.dissentmagazine.org/online\\_articles/progressive-neoliberalism-reactionary-populism-nancy-fraser](https://www.dissentmagazine.org/online_articles/progressive-neoliberalism-reactionary-populism-nancy-fraser).

Frauenlob, M., Kuhnhenn, K., Laumanns, C., Schmelzer, M., Treu, N., Vetter, A., 2017. Kein Wachstum ist auch (k)eine Lösung - Mythen und Behauptungen über Wirtschaftswachstum und Degrowth (Is Degrowth the Solution? Myths and Claims about Economic Growth and Degrowth).

Gilbert, J., 2016. Land grabbing, investors, and indigenous peoples: new legal strategies for an old practice? *Commun. Dev. J.* 51 (3), 350–366.

Gorz, A., 1968. *Strategy for Labor: A Radical Proposal*. Beacon Press, Boston.

Hall, R., Edelman, M., Borras Jr, S.M., Scoones, I., White, B., Wolford, W., 2015. Resistance, acquiescence or incorporation? An introduction to land grabbing and political reactions 'from below'. *J. Peasant Stud.* 42 (3–4), 467–488.

Hardin, G., 1968. The tragedy of the commons. *Science* 162, 1243–1248.

Hartmann, B., 2010. Rethinking climate refugees and climate conflict: rhetoric, reality and the politics of policy discourse. *J. Int. Dev.* 22 (2), 233–246.

Harvey, D., 2003. *The New Imperialism*. Oxford University Press, Oxford.

Her Majesty's Government, 2010. *A Strong Britain in an Age of Uncertainty: The National Security Strategy*. <https://www.gov.uk/government/publications/the-national-security-strategy-a-strong-britain-in-an-age-of-uncertainty>.

Hildyard, N., 2010. 'Scarcity' as political strategy: reflections on three hanging children. In: Mehta, L. (Ed.), *The Limits to Scarcity*. Earthscan, London, pp. 149–164.

Hirsch, F., 1976. *Social Limits to Growth*. Harvard University Press, Harvard.

Homer-Dixon, T.F., 1994. Environmental scarcities and violent conflict: Evidence from cases. *Int. Secur.* 5–40.

Homer-Dixon, T.F., 2010. *Environment, Scarcity, and Violence*. Princeton University Press, Princeton.

Huff, A., 2017. Black sands, green plans and vernacular (in) securities in the contested margins of south-western Madagascar. *Peacebuilding* 1–17.

Huff, A., Tonui, C., 2017. Making 'Mangroves Together': Carbon, conservation and co-management in Gazi Bay, Kenya. ESRC STEPS Centre, Brighton.

Huff, A., Brock, A., 2017. Accumulation by restoration: degradation neutrality and the faustian bargain of conservation finance. *Antipode* Interventions.

Kallis, G., 2015. Social limits of growth. In: D'Alisa, G., Demaria, F., Kallis, G. (Eds.), *Degrowth: A Vocabulary for a New Era*. Routledge, New York and London, pp. 137–140.

Kallis, G., March, H., 2015. Imaginaries of hope: The utopianism of degrowth. *Ann. Assoc. Am. Geogr.* 105 (2), 360–368.

Kay, K., 2017. A hostile takeover of nature? Placing value in conservation finance. *Antipode* 50 (1), 164–183.

Kelley, C.P., Mohrtadi, S., Cane, M.A., Seager, R., Kushnir, Y., 2015. Climate change in the Fertile Crescent and implications of the recent Syrian drought. *Proc. Natl. Acad. Sci.* 201421533.

Khagram, S., Clark, W., Raad, D.F., 2003. From the environment and human security to sustainable security and development. *J. Human Dev.* 4 (2), 289–313.

Kill, J., Franchi, G., 2016. RioTinto's biodiversity offset in Madagascar: Double landgrab in the name of biodiversity. *World Rainforest Movement and Re:Common*, Germany.

Kothari, A., 2014. Radical ecological democracy: a path forward for India and beyond. *Development* 57 (1), 36–45.

Kothari, A., Demaria, F., Acosta, A., 2014. *Buen Vivir, degrowth and ecological Swaraj: Alternatives to sustainable development and the green economy*. *Development* 57 (3–4), 362–375.

Latouche, S., 2013. La décroissance permet de s'affranchir de l'impérialisme économique. <http://www.fdesouche.com/604609-serge-latouche-la-decroissance-permet-de-saffranchir-de-lesperialisme-economique> (accessed 03.12.17).

Le Billon, P., 2015. Resources, wars and violence. In: Bryant, R.L. (Ed.), *The International Handbook of Political Ecology*. Edward Elgar Publishing Ltd, Cheltenham, UK and Northampton, MA, USA, pp. 176–188.

Leiss, W., 1988. *Limits to Satisfaction: An Essay on the Problem of Needs and Commodities*. McGill-Queen's Press, Canada.

Lufs, F., 2010. Deconstructing economic interpretations of sustainable development: limits, scarcity and abundance. In: Mehta, L. (Ed.), *The Limits to Scarcity: Contesting the Politics of Allocation*. Earthscan, London, pp. 93–108.

Lunstrum, E., 2014. Green militarization: anti-poaching efforts and the spatial contours of Kruger National Park. *Ann. Assoc. Am. Geogr.* 104 (4), 816–832.

Luckham, R., 2017. Whose violence, whose security? Can violence reduction and security work for poor, excluded and vulnerable people? *Peacebuilding* 5 (2), 99–117.

Malm, A., 2015. *Fossil Capital: The Rise of Steam-Power and the Roots of Global Warming*. Verso, London.

Mann, A., 2017. Food sovereignty and the politics of food scarcity. In: Dawson, M.C., Rosin, C., Wald, N. (Eds.), *Global Resource Scarcity: Catalyst for Conflict or Cooperation?* Routledge, Oxon, UK and New York, pp. 131–143.

McAfee, K., 1999. Selling nature to save it? Biodiversity and green developmentalism. *Environ. Plann. D: Soc. Space* 17, 133–154.

McAfee, K., 2014. Green economy and its others: conservation, scarcity, and buen vivir. <https://www.degrowth.info/wp-content/uploads/2015/08/3540.pdf> (accessed 09.02.18).

McAfee, K., 2016. The politics of nature in the anthropocene. In: Emmett, R., Lekan, T. (Eds.) *Whose Anthropocene? Revisiting Dipesh Chakrabarty's 'Four Theses'*. RCC Perspectives: Transformations in Environment and Society 2, 65–72.

McElwee, P., 2017. The metrics of making ecosystem services. *Environ. Soc.* 8 (1), 96–124.

Meadows, D.H., Meadows, D.L., Randers, J., Behrens, W.W., 1972. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. Universe Books, New York.

Mehta, L., 2005. *The Politics and Poetics of Water: The Naturalisation of Scarcity in Western India*. Orient Blackswan, Telangana, India.

Mehta, L., 2010. *The Limits to Scarcity: Contesting the Politics of Allocation*. Earthscan, London.

Mehta, L., Veldwisch, G.J., Franco, J., 2012. Introduction to the Special Issue: Water grabbing? Focus on the (re) appropriation of finite water resources. *Water Alternatives* 5 (2), 193–207.

Millstone, E., 2010. Chronic hunger: a problem of scarcity or inequity? In: Mehta, L. (Ed.), *The Limits to Scarcity: Contesting the Politics of Allocation*. Earthscan, London, pp. 179–193.

Moore, J., 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. Verso, London.

Neves, K., Igote, J., 2012. Uneven development and accumulation by dispossession in nature conservation: Comparing recent trends in the Azores and Tanzania. *Tijdschrift voor economische en sociale geografie* 103 (2), 164–179.

Newborne, P., Mason, N., 2012. The private sector's contribution to water management: Re-examining corporate purposes and company roles. *Water Altern.* 5 (3), 603–618.

Ostrom, E., 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, Cambridge.

Paech, N., 2015. Postwachstum als Schutz vor Konsum-Burn-Out (Degrowth as a Protection against Consumer Burn-Out). <http://gruener-journalismus.de/postwachstum-als-schutz-vor-konsum-burn-out/> (accessed 08.02.18).

Panayotakis, C., 2011. *Remaking Scarcity: From Capitalist Inefficiency to Economic Democracy*. Pluto Press, London.

Passadakis, A., Schmelzer, M., 2010. *Postwachstum – 12 Fluchtlinien einer solidarischen Ökonomie jenseits des Wachstums* (Degrowth - 12 sketches of a solidarity-based economy beyond growth).

Peluso, N.L., Lund, C., 2011. New frontiers of land control: Introduction. *J. Peasant Stud.* 38 (4), 667–681.

Polanyi, K., 2001 [1944]. *The Great Transformation: The Political and Economic Origins of Our Time*. Beacon Press, Boston, MA.

Rayner, S., 2010. Foreword. In: Mehta, L. (Ed.), *The Limits to Scarcity*. Earthscan, London, pp. x–xvi.

Rickford, R., 2017. *A Time of Monsters: Corporate Liberalism and The Rise of Trumpism*. Black Perspectives. Retrieved from <http://www.aihhs.org/a-time-of-monsters-corporate-liberalism-and-the-rise-of-trumpism/>.

Rio Tinto, 2016. QMM. Biodiversity, Communities and Social Performance Multi Year Plan 2016–2021. Rio Tinto, UK.

Robbins, L., 1932. *An Essay on the Nature and Significance of Economic Science*. MacMillan & Co., London.

Robertson, T., 2012. *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism*. Rutgers University Press, New Brunswick, New Jersey, USA.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F.S., Lambin, E.F., Schellnhuber, H.J., 2009a. A safe operating space for humanity. *Nature* 461 (7263), 472–475.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F.S., Lambin, E., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H.J., Nykvist, B., 2009. Planetary boundaries: exploring the safe operating space for humanity.

Rocheleau, D.E., 2015. Networked, rooted and territorial: Green grabbing and resistance in Chiapas. *J. Peasant Stud.* 42 (3–4), 695–723.

Roman-Alcalá, A., 2017. Looking to food sovereignty movements for postgrowth theory. *Ephemera* 17 (1), 119.

Rutherford, S., 2018. The Anthropocene's animal? Coywolves as feral cotravelers. *Environ. Plann. E: Nat. Space* 1 (1–2), 206–223.

Sahlins, M., 1972. *Stone Age Economics*. Aldine Publishing Company, New York.

Salleh, A. (Ed.), 2009. *Eco-Sufficiency & Global Justice: Women Write Political Ecology*. Pluto Press, London, pp. 251–268.

Saumelson, P.A., 1948. *Economics, An Introductory Analysis*. McGraw-Hill, USA.

Schneidewind, U., Zahrt, A., 2013. Damit gutes Leben einfacher wird - Perspektiven einer Suffizienzpolitik (Making the Good Life Easier – Perspectives on Sufficiency Policy). oekom verlag, Munich.

Scoones, I., 2010. Seeing scarcity: understanding soil fertility in Africa. In: Mehta, L. (Ed.), *The Limits to Scarcity*. Earthscan, London, pp. 165–178.

Simbaña, F., 2011. El sumak kawsay como proyecto político (Sumak Kawsay as a political project). In: Lang, M., Mokrani, D. (Eds.), *Más allá del Desarrollo (Beyond Development)*. Rosa Luxemburg Foundation, Quito.

Smith, N., 2007. Nature as accumulation strategy. *Socialist Register* 16.

Sojamo, S., Larson, E.A., 2012. Investigating food and agribusiness corporations as global water security, management and governance agents: The case of Nestlé, Bunge and Cargill. *Water Alternatives* 5 (3), 619–635.

Sommer, B., Welzer, H., 2016. Transformationsdesign - Wege in eine zukunftsfähige Moderne (Transformationdesign - Pathways towards a sustainable Modernity). oekom verlag, Munich.

Steffen, W., Richardson, K., Rockström, J., Cornell, S.E., Fetzer, I., Bennett, E.M., de Wit, C.A., 2015. Planetary boundaries: Guiding human development on a changing planet. *Science* 347 (6223), 1259855.

Stegen, K.S., 2015. Heavy rare earths, permanent magnets, and renewable energies: An imminent crisis. *Energy Policy* 79, 1–8.

Stiglitz, J.E., 1988. *Economics of the Public Sector*. Norton and Company, New York.

Sullivan, S., 2012. *Financialisation, Biodiversity Conservation and Equity: Some Currents and Concerns*. Third World Network.

Tellman, U., 2015. Austerity and scarcity: About the limits and meanings of liberal economy. *Ephemera: Theory Politics Organiz.* 15 (1), 21–40.

Tröger, N., Wieser, H., Hübner, R., 2017. Smartphones are Replaced More Frequently than t-shirts. *Gerechtigkeit Muss Sein*.

UNEP, 2011. *Livelihood Security: Climate Change, Migration and Conflict in the Sahel*. United Nations Environment Program, Geneva.

Vaughan, G., 2007. *Women and the Gift Economy: A Radically Different Worldview is Possible*. Inanna Publications & Education, Toronto.

Verzola, R., 2015. Studying abundance: building a new economics of scarcity, sufficiency, and abundance. In: Elliott, P.W., Hepting, D.H. (Eds.), *Free Knowledge – Confronting the Commodification of Human Discovery*. University of Regina Press, Regina, Saskatchewan, Canada.

Vía Campesina, 1996. *Tlaxcala Declaration of the Vía Campesina (Declaration of the Second International Conference of Vía Campesina, Tlaxcala, Mexico)*.

Voigt, C., 2009. Sustainable security. *Yearbook of Int. Environ. Law* 19 (1), 163.

Ward, B., 1966. *Spaceship Earth*. Hamilton, London.

Weeber, S., 2016. Nodes of resistance to green grabbing: a political ecology. *Environ. Soc. Psychol.* 1 (2).

White, B., Borras Jr, S.M., Hall, R., Scoones, I., Wolford, W., 2012. The new enclosures: critical perspectives on corporate land deals. *J. Peasant Stud.* 39 (3–4), 619–647.

Wichterich, C., 2012. The Future we want. A feminist perspective. *Ecology Series* Vol 21. Heinrich Böll Stiftung, Berlin.

Wichterich, C., 2015. *Contesting Green Growth, Connecting Care, Commons and Enough*. In: Harcourt, W., Nelson, I. (Eds.), *Practicing Feminist Political Ecology: Going Beyond the Green Economy*. Zed Books, London.

Wolford, W., Borras, S.M., Hall, R., Scoones, I., White, B., 2013. Governing global land deals: the role of the state in the rush for land. *Dev. Change* 44 (2), 189–210.

Xenos, N., 1987. *Liberalism and the postulate of scarcity*. *Polit. Theory* 15 (2), 225–243.

Xenos, N., 1989. *Scarcity and Modernity*. Routledge, London.